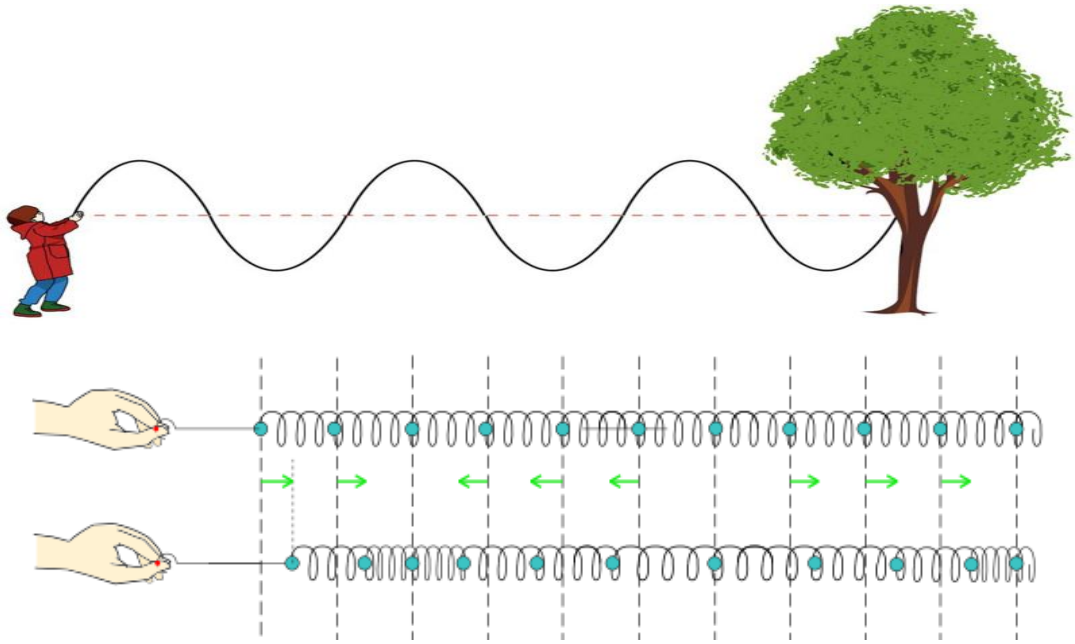
Name _____ Date _____ Class _____

Physics of Sound Quiz

1. **Label the transverse wave and the longitudinal wave.**



2. **Draw a transverse wave with axes of displacement and time.**
   a. **Label the amplitude.**
   b. **Label the period.**

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3. **Calculate the speed of a wave with amplitude of 2 meters, frequency of 200 Hz, and wavelength of 4 meters.**

4. **What is the difference between sound and noise?**

5. **How does sound move through different media?**

6. **Speakers, 1 meter away, produce a sound intensity of 0.01 W/m^2. Calculate the sound intensity level of the speakers.**

$$I_0 = 10^{-12}\,\frac{watts}{m^2} \qquad \beta(dB) = 10\log\left(\frac{I}{I_0}\right)$$